An effort was made to inform the public of the unusual rainfall and probable freshets, and the wisdom of these warnings was fully justified by the succeeding reports.

The following reports will serve to illustrate the destructive effect of these floods, which continued into the month of April, and they will be further described in the next REVIEW:

Virginia.—Lynchburg: incessant rains for several days caused a freshet in the James River and its tributaries; at 11.45 p. m. of the 30th the water had reached a height of twenty-four feet above low-water mark, being the highest since the disastrous flood of 1877. Great damage is reported along the banks of the river; several bridges were carried away, railroad tracks submerged, and traffic interrupted.

Variety Mills, Nelson county: disastrous floods followed the heavy rainfall of the last days of the month; the Tye and James Rivers were higher than at any time since the unprecedented flood of November 24, 1877. The Richmond and Allegheny Railroad was seriously damaged by the overflow in this county and elsewhere.

Georgia.—Augusta: a rapid rise in the Savannah River, causing it to overflow its banks, occurred on the 30th, the water reaching a height of 30.8 feet on the 31st and was still rising. Traffic was interrupted and railroads and mills compelled to suspend operations.

West Point, Troup county: the Chattahoochee River rose during the night of the 30th, flooding the town, carrying away the railroad bridge, and causing a loss of $100,000 to property.

Columbus, Muscogee county: the Chattahoochee River was higher than ever before known on the 30th. The low country farms were damaged many thousand dollars, and the river was rising at the rate of six inches an hour.

Rome, Floyd county: the flood in the Coosa River submerged this city on the 30th, causing the inhabitants to seek the hill tops for safety.

Alabama.—Montgomery: owing to the heavy rains, a rapid rise occurred in the Alabama River on the 30th, and on the 31st the river had reached the highest point ever known, covering the Union depot railroad track to the depth of eleven inches. Trains were delayed in every direction, and considerable amount of damage done.

Tuscaloosa, Tuscaloosa county: the continuous rains for the forty-eight hours ending on the 30th caused the greatest flood in the Warrior River in fifty years, and from the present outlook the destruction of property and life will be enormous. During the evening of the 30th the river marked sixty-three feet above low-water mark and was still rising. The village of Northport, opposite this place, was flooded and the inhabitants compelled to vacate; below this place hundreds of negroes were cut off without boats and compelled to take to the top of their cabins for safety. Thousands of cattle were caught in the swamps and drowned. Reports from the surrounding country state that bridges and mills have been swept away.

Greensborough, Hale county: the rain storm from 4.30 p. m. of the 28th to 4 a. m. of the 31st was unparalleled, and produced destructive freshets in all streams at the close of the month. The Warrior River, ten miles west of this place, was three feet higher than ever known before; country bridges over numerous creeks were washed away or badly damaged, and railroad traffic between Selma and Tuscaloosa interrupted for five days.

Wetumpka, Elmore county: the bridge across the Coosa River at this place was washed away on the 30th.

Prattville, Autauga county: the freshet undermined a cotton factory, which fell in, causing a loss of $85,000. Two hundred laborers were thrown out of employment.

North Carolina.—Chapel Hill, Orange county: a rapid rise occurred in the Roanoke River on the 31st, which overflowed its banks.

Kentucky.—Lexington, Fayette county: North River was eight feet higher than ever known on the 31st, and was still rising.

Tennessee.—Chattanooga: the river rose 13.5 feet during the twenty-four hours ending 2 p. m. of the 30th, and at 6.30 p. m. of the 31st had reached the height of forty-three feet, ten feet above the danger-line, and was rapidly rising.

Knoxville: the river and all tributary streams were flooded on the 31st, and considerable damage reported. The stage of water at 2 p. m. was 29.5 feet, showing a rise of 15.7 feet during the preceding twenty-four hours.

Sweetwater, Monroe county: at 1 a. m. of the 31st heavy rain was falling and no signs of abatement. The entire lower portion of the town was submerged, and nearly one hundred people rendered homeless.

Loudon, Loudon county: at 9 p. m. of the 31st the river was twenty-three feet and rising at the rate of ten inches per hour; land slides had occurred on the Loudon bluff, and families were driven from their homes on account of the high water.

Nashville: at 2 p. m. of the 31st the river had reached a height of 38.2 feet, and was rising at the rate of two inches per hour. Fears were entertained of a dangerous overflow.

HIGH TIDES.

New River Inlet, North Carolina, 17th.
Fort Macon, North Carolina, 18th, 20th.
Cedar Keys, Florida, 20th, 21st.
New Haven, Connecticut, 21st.
Eastport, Maine, 23d, 25th.

LOW TIDES.

The "New York Herald" of March 4, 1886, states:

The tides in all the bays along the south coast of Long Island have during the past few days been lower than for forty years. Large areas of oyster beds have been left uncovered by water for several hours at a time, and the oysters and clams have been frozen and killed. Many oystermen of Mecox, Shinnecock, Peconic, and Great South bays are heavy losers.

Low tides were also reported from—
Philadelphia, Pennsylvania, 1st, 2d.
New River Inlet, North Carolina, 2d, 3d.

VERIFICATIONS.

INDICATIONS.

The detailed comparison of the tri-daily indications for districts east of the Rocky Mountains during March, 1886, with the telegraphic reports for the succeeding thirty-two hours, shows the general average percentage of verifications to be 75.95 per cent. The percentages for the four elements are: Weather, 78.05; direction of the wind, 75.65; temperature, 73.46; barometer, 84.67 per cent. By geographical districts, they are: For New England, 77.02; middle Atlantic states, 77.12; south Atlantic states, 74.48; eastern Gulf states, 79.03; western Gulf states, 76.79; lower lake region, 74.04; upper lake region, 75.62; Ohio Valley and Tennessee, 76.25; upper Mississippi valley, 74.56; Missouri Valley, 74.65. There were nine omissions to predict, out of 2,865, or 0.31 per cent. Of the 2,856 predictions that have been made, one hundred and thirty-eight, or 4.83 per cent., are considered to have entirely failed; one hundred and eighty-five, or 6.48 per cent., were one-fourth verified; five hundred and twenty-seven, or 18.45 per cent., were one-half verified; five hundred and eighty-six, or 20.52 per cent., were three-fourths verified; 1,420, or 49.72 per cent., were fully verified, so far as can be ascertained from the tri-daily reports.

The percentages of verifications of special predictions for certain localities are, as follows:

Omaha, Nebraska (twenty-seven days), 82.41; Arkansas (twenty-seven days), 84.72; Baltimore, Maryland (twenty-seven days), 74.07; Washington City, 79.44; Portland, Maine, 69.35; Boston, Massachusetts (thirty days), 78.25; Albany, New York, 74.60; Pittsburg, Pennsylvania, 80.65; Erie, Pennsylvania, 69.76; Lynchburg, Virginia, 78.23; Cincinnati, Ohio, 66.13; Louisville, Kentucky, 70.97; Columbus, Ohio, 67.34; Cleveland, Ohio, 66.94; Lamar, Missouri, 71.37; Oswego, New York, 72.58; Rochester, New York, 79.44; Buffalo, New York, 75.81; Indianapolis, Indiana, 74.19; Detroit, Michigan, 78.23; Toledo, Ohio, 76.61; Sandusky, Ohio, 75.81; Cairo, Illinois, 75.81; Saint Louis, Missouri, 64.52; Saint Paul, Minnesota, 64.52; Iowa, 78.63; Milwaukee, Wisconsin, 76.21; Chicago, Illinois, 73.79; Memphis, Tennessee, 79.03; Tennessee, 70.56; Shreveport, Louisiana, 71.77; Georgia, 71.77; northern Florida, 80.24; New York City, 77.02; Philadelphia, Pennsylvania, 75.00; Colorado, 66.53.

CAUTIONARY SIGNALS.

During March, 1886, eighty-three cautionary signals were ordered. Of these, seventy-two, or 86.07 per cent., were justified by winds of twenty-five miles or more per hour at or within one hundred miles of the station. Seventy-nine cautionary off-shore signals were ordered, of which number, sixty-five, or 82.28 per cent., were fully justified, both as to direction and velocity; seventy-eight, or 98.73 per cent., were justified as to direction; and sixty-five, or 82.28 per cent., were justified as to velocity. One hundred and sixty-two signals of all kinds were ordered, one hundred and thirty-seven, or 84.57 per cent., being fully justified. These do not include signals ordered at display stations where the velocity of the wind is only estimated. Of the above cautionary off-shore signals, thirty-seven were changed from cautionary. Seven signals were ordered late. In seventy-four cases, winds of twenty-five miles or more per hour were reported for which no signals were ordered.

COLD-WAVE SIGNALS.

During March, 1886, seventy-nine cold-wave signals were ordered, of which number, fifty-nine, or 77.22 per cent., were justified.

Table of miscellaneous meteorological data for March, 1886—Signal Service observations.

Stations.	Elevation above sea-level.	Atmospheric pressure: Mean actual barometer.	Departure from normal.	Mean reduced barometer.	Extremes: Highest barometer	Date.	Lowest barometer	Date.	Monthly range of barometer.	Temperature of the air: Monthly mean.	Departure from normal.	Extremes: Max.	Date.	Mean max.	Min.	Date.	Mean min.	Monthly range.	Daily ranges: Greatest.	Date.	Least.	Date.	Mean rel. humidity.	Mean dew-point.	Precipitation.	Departure from normal.	Winds: Total movement.	Prevailing direction.	Maximum velocity: Miles p. h.	Direction.	Date.	No. of rainy days.	No. of cloudy days.	No. of fair days.	No. of clear days.
New England.																																			
Eastport	61	29.74	−.07	29.81	30.68	29	29.07	2	1.62	28.1	0.0	49.3	31	34.0	−7.9	1	21.7	57.2	35.4	2	4.1	21	74.0	20.5	2.28	−3.06	7,130	nw.	44	e.	21	14	11	16	4
Portland	99	29.75	−.05	29.86	30.64	29	29.21	22	1.42	29.2	−3.1	49.1	27	35.8	−3.8	1	22.9	52.9	26.4	11	3.9	21	74.3	21.6	3.26	+0.12	6,553	nw.	32	ne.	21	17	12	14	5
Mount Washington	6,279	23.35	....	29.87	30.52	29	29.11	1	1.41	11.3	+1.4	44.0	31	17.4	−37.2	1	3.4	81.2	47.2	2	5.4	31	*	*12.0	3.11	−3.23	†	nw.	115	nw.	1	21	8	13	10
Boston	125	29.74	−.06	29.87	30.58	29	29.24	13	1.34	33.7	−0.1	64.3	31	40.5	−1.2	1	26.2	65.5	27.1	31	3.9	30	69.6	24.1	3.20	−1.51	10,628	nw.	41	e.	21	17	9	15	7
Block Island	27	29.86	....	29.88	30.51	29	29.26	13	1.25	34.2	−0.5	56.0	31	40.6	5.8	2	28.4	50.2	19.3	5	4.2	15	79.4	28.3	5.42	+1.39	12,044	n.	44	nw.	1	12	7	10	8
Narragansett Pier	....	....	....	....	....	...	....	...	....	34.6	....	55.0	26	42.7	4.0	2	27.1	51.0	....	...	....	...	....	....	5.14	+1.00	....	....	...	....	...	13	...	...	...
New Haven	107	29.79	....	29.90	30.52	29	29.30	13	1.22	34.4	−0.4	58.6	16	42.0	1.4	1	27.2	57.2	28.1	16	6.9	20	71.6	25.5	3.20	−1.69	7,247	nw.	32	nw.	2	13	11	12	8
New London	47	29.87	−.05	29.91	30.55	29	29.30	13	1.25	35.1	0.0	55.6	16	41.9	4.5	2	28.2	51.1	21.5	16	5.6	21	74.8	27.5	4.64	−0.19	5,165	nw.	32	s.	31	15	13	15	3
Mid. Atlantic States.																																			
Albany	83	29.85	−.05	29.94	30.51	28	29.33	22	1.18	32.6	+0.5	67.0	31	40.2	−3.5	1	25.6	70.5	24.9	25	6.3	19	71.3	24.0	2.73	−0.02	5,640	nw.	34	s.	31	16	15	13	3
New York City	164	29.75	−.06	29.92	30.48	29	29.30	13	1.18	36.9	+0.5	60.1	31	45.2	7.4	1	30.2	52.7	24.7	25	7.8	20	72.6	28.2	3.54	−0.36	10,767	nw.	54	nw.	2	11	8	13	10
Philadelphia	117	29.82	−.06	29.94	30.46	28	29.30	21	1.17	40.0	+0.9	67.2	31	48.4	8.1	2	31.9	59.1	28.1	15	4.4	29	68.3	29.3	3.17	−0.02	8,969	nw.	36	nw.	3	13	8	15	8
Atlantic City	13	29.91	−.06	29.91	30.43	28	29.24	21	1.19	38.1	+0.2	67.5	16	45.5	10.6	2	30.8	56.0	28.9	16	6.1	27	77.7	31.0	3.40	−0.46	7,930	nw.	31	ne.	27	10	4	10	11
Sandy Hook	28	29.90	−.06	29.92	30.52	28	29.32	14	1.20	36.8	0.0	60.1	31	44.4	9.1	2	31.0	51.0	23.1	16	2.4	29	77.6	30.0	5.27	+0.27	14,608	nw.	60	nw.	1	15	6	14	11
Cape Henlopen	....	....	....	....	....	...	....	...	....	42.0	....	54.0	17	46.1	24.8	3	38.0	29.2	....	...	....	...	....	....	2.43	−1.64	....	....	...	....	...	12	...	...	...
Baltimore	45	29.92	−.06	29.96	30.45	28	29.30	21	1.16	41.6	−0.3	70.6	15	49.6	14.6	2	34.8	56.0	33.2	15	4.4	29	63.9	28.9	4.85	+0.91	5,847	nw.	25	nw.	21	12	9	14	8
Ocean City	....	....	....	....	....	...	....	...	....	41.1	....	68.8	16	47.7	19.7	1	34.6	49.1	....	...	....	...	....	....	1.37	−1.23	....	....	...	....	...	9	...	...	...
Washington City	106	29.86	−.06	29.96	30.44	28	29.27	21	1.17	42.0	+0.5	68.9	16	50.7	13.2	2	34.3	55.7	28.1	25	5.4	29	70.8	32.0	6.41	+2.32	6,299	nw.	30	nw.	2	10	8	10	11
Cape Henry	16	29.97	−.03	29.97	30.37	28	29.34	21	1.03	44.6	−1.8	78.2	25	52.8	20.8	2	37.7	57.4	38.1	25	5.6	29	73.5	35.5	1.75	−4.13	11,209	nw.	48	nw.	2	9	5	12	16
Chincoteague	8	29.96	−.04	29.94	30.40	28	29.31	21	1.08	41.4	+1.1	69.4	16	48.5	16.4	2	34.9	53.0	24.4	16	4.5	28	74.2	33.2	2.39	−1.62	11,570	nw.	51	nw.	2	11	5	15	11
Lynchburg	652	29.28	−.03	29.98	30.45	25	29.40	21	1.06	45.6	+0.2	77.8	25	55.0	22.9	5	36.7	54.9	34.6	18	4.3	27	68.9	35.0	5.79	+1.94	4,121	nw.	23	nw.	23	11	9	15	7
Norfolk	30	29.96	−.02	29.98	30.40	28	29.35	21	1.05	40.3	−1.4	76.8	25	49.8	21.0	2	33.7	55.8	35.9	25	5.9	1	68.4	35.7	2.36	−2.22	6,125	n.	35	s.	31	8	6	13	12
South Atlantic States.																																			
Charlotte	808	29.15	−.02	30.00	30.30	24	29.48	20	0.82	48.5	−1.8	76.0	25	58.8	24.4	11	38.8	51.6	33.9	24	6.4	29	65.5	35.5	6.39	+1.12	5,126	sw.	28	sw.	31	11	9	13	9
Fort Macon	11	30.01	−.01	29.99	30.29	28	29.42	13	0.87	49.3	−0.8	64.4	30	55.1	29.5	3	43.2	34.9	21.6	24	4.1	27	85.7	45.0	4.64	−0.74	11,807	sw.	51	sw.	21	11	7	11	13
Hatteras	12	30.00	−.01	29.99	30.30	28	29.39	13	0.80	48.6	−0.3	68.2	30	55.3	29.0	2	43.0	39.2	23.0	8	5.7	1	77.3	41.3	4.15	−3.32	11,195	sw.	39	n.	10	9	7	10	14
Kitty Hawk	9	30.00	−.02	29.99	30.37	28	29.38	13	0.99	46.6	−1.0	73.0	19	54.9	27.3	3	39.6	45.7	29.7	25	5.7	7	73.3	37.5	4.90	−1.15	12,367	sw.	48	s.	31	9	7	10	14
New River Inlet	....	....	....	....	....	...	....	...	....	50.1	....	67.5	19	58.2	27.2	2	42.1	40.3	....	...	....	...	....	....	3.53	....	....	....	...	....	...	10	...	...	...
Smithville	34	29.98	−.02	29.99	30.30	24	29.47	13	0.83	50.4	−3.1	69.0	30	56.9	27.2	3	43.1	41.8	25.5	24	5.4	20	80.1	44.1	5.40	+1.50	8,408	sw.	42	s.	31	11	7	11	13
Wash Woods ‡	....	....	....	....	....	...	....	...	....	42.9	....	70.0	19	51.0	13.0	4	34.9	57.0	....	...	....	...	....	....	2.64	....	....	....	...	....	...	12	...	...	...
Wilmington	52	29.97	−.01	30.00	30.30	24	29.45	13	0.85	52.5	−1.9	78.1	25	62.6	28.8	1	42.6	49.3	36.2	25	8.9	27	71.6	42.2	5.60	+1.30	5,871	sw.	30	w.	12	11	5	14	12
Charleston	52	30.00	.00	30.02	30.36	24	29.56	13	0.80	53.9	−3.6	75.9	25	61.7	30.5	11	46.4	45.4	24.4	25	7.7	4	76.6	45.7	2.60	−1.08	5,556	sw.	26	s.	31	11	9	16	6
Augusta	183	29.86	−.03	30.02	30.34	24	29.56	20	0.78	54.2	−1.6	82.0	30	65.4	25.6	11	43.9	56.4	37.5	24	8.0	20	66.6	41.4	7.42	+1.94	3,776	w.	24	sw.	31	8	7	14	10
Savannah	87	29.97	−.01	30.03	30.35	24	29.59	13	0.76	57.2	−2.1	77.0	30	64.0	33.0	11	50.0	44.0	21.0	12	6.0	16	75.9	48.6	3.16	−0.89	6,370	sw.	32	s.	31	14	8	16	7
Jacksonville	43	30.02	−.02	30.03	30.37	25	29.65	13	0.73	59.9	−2.7	83.6	30	67.2	37.0	11	53.3	46.6	23.2	24	3.8	5	78.2	52.3	6.74	+3.47	5,213	nw.	34	w.	31	19	12	16	3
Florida Peninsula.																																			
Cedar Keys	22	30.00	−.08	29.98	30.34	25	29.63	12	0.71	59.2	−4.3	76.8	29	65.5	35.9	11	51.4	40.9	25.1	11	4.7	4	85.5	54.6	12.14	+8.87	7,288	w.	33	w.	13	16	13	12	6
Key West	20	30.03	−.05	30.00	30.33	25	29.76	13	0.57	71.0	−2.5	82.0	15	76.0	53.0	11	66.7	29.0	16.7	13	4.7	7	77.1	63.1	1.30	+0.63	8,429	se.	35	n.	13	6	4	12	13
Sanford	25	30.04	....	30.03	30.40	25	29.64	13	0.76	62.2	−3.0	86.0	29	70.9	42.4	11	54.7	43.6	27.1	25	6.3	5	75.8	53.4	8.17	+5.82	4,980	n.	23	n.	10	17	11	15	5
Eastern Gulf States.																																			
Atlanta	1,129	28.85	−.03	30.03	30.31	25	29.54	20	0.77	50.1	−2.6	73.0	25	59.2	27.0	11	42.6	46.0	27.5	14	5.5	20	63.8	36.6	11.16	+4.41	8,535	nw.	33	w.	21	11	5	19	7
Pensacola	30	30.02	−.06	30.00	30.32	25	29.59	12	0.73	57.5	−3.1	73.8	23	64.8	37.7	11	51.6	36.1	26.1	23	5.3	13	77.4	49.7	13.37	+8.97	5,556	s.	28	s.	30	18	11	11	9
Mobile	35	30.02	−.03	30.02	30.32	25	29.62	20	0.70	56.7	−3.0	75.0	17	64.5	34.0	11	49.8	41.0	28.1	14	6.6	28	78.3	48.7	14.02	+6.84	6,500	n.	27	s.	27	20	11	10	10
Montgomery	219	29.80	−.05	30.00	30.31	25	29.55	20	0.75	55.7	−1.8	77.2	19	64.8	29.9	11	47.2	47.3	32.9	14	7.4	4	69.9	44.7	6.86	+0.39	4,667	w.	25	sw.	27	10	11	13	7
Vicksburg	209	29.82	−.04	30.02	30.34	10	29.60	20	0.74	55.0	−3.2	83.0	18	65.7	28.9	10	47.2	54.1	27.2	15	9.9	2	67.9	43.2	6.07	−0.52	4,304	sw.	28	w.	20	14	12	12	7
New Orleans	52	29.98	−.04	30.00	30.29	24	29.65	20	0.64	58.6	−4.2	80.8	29	66.1	40.1	31	52.3	40.7	25.0	23	5.1	8	76.4	49.8	8.41	+2.41	6,118	se.	23	ne.	4	13	12	12	7
Western Gulf States.																																			
Shreveport	227	29.79	−.04	30.00	30.34	10	29.58	19	0.76	54.1	−4.5	83.0	17	64.6	29.4	10	46.5	53.6	33.2	23	7.0	3	72.1	43.8	6.32	+1.53	5,875	s.	28	w.	20	14	14	6	11
Fort Smith	470	29.51	−.06	30.00	30.34	10	29.53	19	0.82	47.5	−2.2	82.0	24	58.4	25.2	10	39.0	56.8	40.0	23	5.3	30	69.4	30.1	3.02	+1.30	5,682	e.	24	nw.	20	14	12	12	7
Little Rock	299	29.69	−.04	29.98	30.34	10	29.41	20	0.93	48.7	−4.9	79.0	18	58.5	23.0	10	40.6	56.0	30.9	23	5.7	1	72.9	38.8	3.45	−1.38	5,787	nw.	25	w.	20	16	13	9	9
Galveston	40	30.00	−.02	30.00	30.32	22	29.59	19	0.73	59.0	−4.6	70.6	23	63.6	37.8	30	53.6	32.8	25.4	29	2.8	2	80.4	52.1	3.19	+0.05	8,956	e.	36	se.	20	9	9	15	7
Indianola	26	29.98	−.04	29.97	30.32	22	29.56	19	0.76	60.9	−3.8	79.0	27	67.3	39.9	30	55.2	39.1	23.9	31	3.5	3	82.4	54.8	3.16	+0.61	11,491	e.	44	e.	2	12	12	14	5
Palestine	533	29.48	−.05	30.02	30.31	10	29.55	19	0.76	55.0	−4.2	80.2	17	65.8	27.3	10	46.8	52.9	28.8	23	6.2	3	71.2	44.6	4.62	+1.22	7,493	s.	32	nw.	20	11	11	10	10
San Antonio	781	29.18	−.03	29.97	30.25	22	29.62	19	0.63	59.2	−4.4	81.8	27	70.0	34.8	30	48.7	47.0	36.4	31	5.7	3	68.6	47.1	2.39	0.00	7,267	n.	30	n.	28	10	18	5	8
Rio Grande Valley.																																			
Brownsville	57	29.93	−.03	29.94	30.30	22	29.60	19	0.70	66.1	−2.6	82.9	27	74.8	43.3	30	58.7	39.6	31.4	31	6.9	2	82.7	59.9	1.15	−0.10	6,574	s.	31	s.	25	11	14	11	6
Rio Grande City	230	29.78	−.06	29.93	30.26	22	29.57	19	0.69	68.5	−1.5	89.3	20	79.4	46.0	31	60.1	43.3	37.6	31	4.9	4	68.0	56.0	1.51	+0.47	4,590	se.	20	se.	24	6	11	11	9
Ohio Val. & Tenn.																																			
Chattanooga	783	29.21	−.02	30.03	30.33	2	29.45	20	0.88	49.3	−1.7	75.6	17	58.8	25.0	11	41.3	50.6	35.7	24	3.9	30	65.5	36.4	12.77	+6.51	5,876	sw.	30	w.	21	10	11	14	6
Knoxville	980	28.98	−.03	30.02	30.34	2	29.44	20	0.90	47.6	+0.1	75.8	17	57.2	23.3	11	39.4	52.5	37.5	24	2.2	30	66.5	35.4	11.15	+5.41	5,620	w.	38	w.	20	14	12	14	5
Memphis	321	29.68	−.03	30.00	30.38	2	29.43	20	0.95	48.9	−2.9	81.0	18	56.8	26.7	10	42.4	54.3	27.4	24	6.1	27	64.8	35.8	3.00	−2.96	5,969	w.	32	nw.	9	11	11	11	9
Nashville	549	29.42	−.05	30.00	30.40	2	29.34	20	1.06	47.1	−2.1	77.9	18	56.1	21.6	11	38.8	56.3	44.0	24	4.9	31	65.3	34.5	4.76	−0.49	6,221	s.	36	w.	20	10	11	16	4
Louisville	551	29.41	−.04	29.99	30.45	2	29.29	20	1.16	43.9	−0.7	77.2	18	52.7	22.5	3	35.3	54.7	35.0	18	4.6	27	65.4	31.8	3.42	−0.95	6,587	sw.	31	w.	22	12	13	8	10
Greencastle	897	29.01	....	29.98	30.46	2	29.24	20	1.22	39.9	....	75.0	19	48.5	15.7	3	32.1	59.3	32.2	14	6.3	12	72.4	30.9	3.40	....	6,429	sw.	32	s.	20	16	11	13	7
Indianapolis	766	29.14	−.05	29.98	30.47	2	29.22	20	1.26	39.4	−0.5	75.0	19	47.9	15.6	3	31.0	59.4	37.6	14	7.4	13	70.5	29.4	2.85	−1.07	5,177	nw.	22	nw.	22	16	12	12	7
Cincinnati	628	29.31	−.05	29.99	30.45	2	29.25	20	1.20	41.5	−1.5	75.1	19	51.7	17.3	3	34.1	57.8	33.4	24	6.1	13	67.5	30.3	2.27	−1.33	7,187	sw.	30	sw.	12	13	10	14	7
Columbus	805	29.10	−.05	29.99	30.39	2	29.29	20	1.10	38.6	+0.5	73.3	19	47.7	10.2	1	30.2	63.1	36.3	14	5.5	8	75.9	31.5	3.90	+0.72	7,048	sw.	32	w.	22	16	10	19	2
Pittsburg	766	29.12	−.06	29.96	30.33	23	29.28	20	1.04	40.4	+2.4	76.6	19	50.4	11.4	2	32.4	65.2	32.4	15	6.2	13	78.9	33.9	2.85	−0.11	5,613	nw.	22	w.	31	13	10	17	4
Lower lake region.																																			
Buffalo	690	29.18	−.05	29.96	30.45	28	29.22	21	1.23	31.0	+1.1	68.5	31	38.3	0.7	1	25.8	67.8	32.1	31	5.0	5	82.9	26.4	4.23	+1.35	8,640	sw.	36	sw.	31	18	17	9	5
Oswego	335	29.55	−.07	29.93	30.47	28	29.30	21	1.17	30.0	−1.1	68.0	31	36.8	−3.9	1	23.9	71.9	27.3	25	4.7	19	78.4	23.9	3.73	+0.67	9,130	nw.	40	se.	21	12	18	9	4
Rochester	621	29.25	−.05	29.95	30.50	28	29.26	21	1.24	31.5	+1.5	66.9	31	39.0	1.0	1	25.3	65.9	27.3	31	7.2	6	81.7	26.3	2.85	−0.39	9,100	w.	40	nw.	23	18	19	8	4
Erie	681	29.20	−.05	29.96	30.42	28	29.23	21	1.19	31.7	−1.2	68.0	31	41.9	−1.2	1	24.3	69.2	37.0	15	8.4	4	80.9	25.9	3.03	−0.05	7,333	nw.	33	s.	29	15	16	9	6
Cleveland	690	29.19	−.07	29.96	30.42	1	29.20	20	1.22	34.9	+1.5	73.8	19	43.4	7.4	1	27.7	66.4	37.3	19	5.5	13	79.1	28.6	2.00	−0.92	7,535	w.	30	sw.	21	14	9	10	6
Sandusky	639	29.27	−.05	29.98	30.47	1	29.24	20	1.24	34.9	−0.6	76.0	19	42.7	6.9	1	27.5	69.1	42.6	19	5.6	22	76.2	27.6	2.38	−0.30	10,064	sw.	40	nw.	22	11	9	16	6
Toledo	651	29.25	−.05	29.97	30.48	1	29.17	20	1.31	34.0	−1.4	67.5	19	42.7	7.8	1	26.8	59.7	36.2	15	5.6	22	76.0	26.6	2.28	+0.13	7,331	sw.	29	ne.	28	12	10	13	8
Detroit	661	29.23	−.05	29.97	30.48	1	29.15	20	1.33	35.6	+3.0	61.0	15	43.3	5.9	1	25.7	55.1	33.2	15	4.6	14	77.0	28.8	1.70	−0.98	7,660	e.	27	s.	11	15	12	11	8
Upper lake region.																																			
Alpena	609	29.27	−.05	29.97	30.52	28	29.17	21	1.36	25.5	+2.1	48.2	25	32.9	−5.3	1	18.6	53.5	34.9	10	2.0	20	83.3	21.1	5.56	+3.59	7,374	w.	26	se.	24	15	15	10	6
Escanaba	608	29.30	−.03	30.01	30.64	1	29.23	31	1.41	24.4	+2.6	46.7	25	32.2	−7.0	1	15.8	53.7	31.7	5	2.7	18	78.8	18.7	3.15	+1.40	6,660	n.	29	n.	21	16	15	8	8
Grand Haven	620	29.24	−.08	29.94	30.51	1	29.08	20	1.42	30.4	−0.3	61.9	19	37.0	5.4	1	24.7	56.5	31.6	24	4.4	11	79.8	24.7	3.04	+0.54	7,316	nw.	36	nw.	21	16	14	8	9
Mackinaw City	605	29.28	−.07	29.98	30.59	1	29.20	31	1.39	26.5	....	45.0	24	33.2	−5.2	1	17.0	50.2	28.5	24	6.4	21	71.8	18.5	1.97	+0.66	8,102	o.	36	sw.	25	15	12	12	7
Marquette	672	29.23	−.05	30.01	30.63	1	29.30	31	1.33	24.1	+0.8	52.3	16	33.6	−3.0	14	17.2	55.3	32.7	14	4.4	18	76.3	16.9	2.19	−0.79	6,332	nw.	35	w.	25	13	12	10	9
Port Huron	633	29.24	−.06	29.95	30.48	1	29.16	21	1.32	30.4	+1.9	52.8	19	37.4	1.9	1	24.4	50.9	23.3	24	6.0	12	81.0	25.2	2.82	−0.75	7,902	ne.	34	w.	26	15	10	14	7
Chicago	661	29.24	−.05	29.97	30.53	2	29.09	20	1.44	36.1	+1.3	69.9	19	44.2	15.3	3	30.1	54.6	31.8	19	6.0	3	78.0	29.7	1.79	−1.01	6,854	nw.	20	sw.	8	9	13	11	7
Milwaukee	697	29.19	−.06	29.97	30.55	2	29.10	20	1.44	30.7	+0.5	50.8	24	36.5	8.8	2	25.6	50.0	29.8	24	2.0	31	80.8	25.3	3.42	+0.69	9,412	n.	37	n.	20	17	12	11	8
Duluth	672	29.28	−.02	30.06	30.67	1	29.51	31	1.16	23.9	−0.1	54.4	24	34.9	−5.0	2	14.8	59.4	36.1	31	5.3	18	72.2	15.7	1.07	−0.52	5,311	ne.	36	se.	25	9	8	11	12
Extreme northwest.																																			
Moorhead	923	29.00	−.04	30.08	30.59	27	29.57	13	1.02	23.9	+6.0	58.6	23	33.3	−6.1	9	14.6	64.7	35.6	10	7.6	19	81.4	18.7	0.14	−0.90	9,454	n.	38	n.	12	6	11	15	5
Saint Vincent	804	29.15	−.05	30.11	30.66	27	29.55	24	1.11	17.7	+4.5	44.1	23	28.4	−12.6	9	6.8	56.7	35.0	4	8.4	14	84.8	13.9	0.29	−0.25	7,627	nw.	39	w.	24	7	10	12	9
Bismarck	1,694	28.17	−.02	30.09	30.58	27	29.49	13	1.09	24.2	+2.2	61.1	23	35.6	−18.1	9	14.9	79.2	39.7	9	8.5	3	83.8	19.7	0.94	−0.12	5,016	n.	37	nw.	12	10	11	11	9
Fort Buford	1,930	27.92	−.05	30.09	30.59	27	29.53	13	1.06	26.2	+3.0	69.1	23	37.3	−10.5	2	15.9	79.6	42.8	9	7.3	4	79.1	20.0	0.31	−0.14	6,881	w.	52	w	24	11	11	16	4
Fort Totten	1,490	28.38	....	30.10	30.62	27	29.54	13	1.07	17.5	....	44.0	23	29.3	−15.6	9	6.5	59.6	39.5	10	7.4	1	81.0	12.7	0.72	....	....	nw.	40	sw.	15	10	9	12	10
Fort Yates	....	....	....	....	....	...	....	...	....	27.8	....	67.5	23	38.2	−15.2	9	17.5	82.7	....	...	....	...	....	....	1.09	−0.61	....	....	...	....	...	11	...	...	...

Table of miscellaneous meteorological data for March, 1886—Signal Service observations—Continued.

Stations.	Elevation above sea-level.	Atmospheric pressure: Mean actual barometer.	Departure from normal.	Mean reduced barometer.	Extremes: Highest barometer	Date.	Lowest barometer	Date.	Monthly range of barometer.	Temperature of the air: Monthly mean.	Departure from normal.	Extremes: Max.	Date.	Mean max	Min.	Date.	Mean min.	Monthly range.	Daily ranges: Greatest.	Date.	Least.	Date.	Mean rel. humidity.	Mean dew-point.	Precipitation.	Departure from normal.	Winds: Total movement.	Prevailing direction.	Maximum velocity: Miles p. hr.	Direction.	Date.	No. of rainy days.	No. of cloudy days.	No. of fair days.	No. of clear days.
Upper Miss. Valley.																																			
Saint Paul	830	29.08	—.03	30.02	30.62	2	29.48	31	1.14	27.5	— 0.9	58.0	24	35.8	— 9.8	2	19.2	67.8	33.3	2	6.7	28	76.3	20.3	1.09	— 0.46	4,382	nw.	36	w.	25	12	7	17	7
La Crosse	725	29.18	—.04	29.98	30.60	2	29.35	20	1.26	31.0	— 0.3	54.3	24	39.1	— 0.3	2	23.4	54.6	31.5	10	8.0	30	73.4	23.4	1.36	— 0.34	6,317	n.	42	n.	21	15	11	10	10
Davenport	615	29.30	—.06	29.98	30.59	2	29.25	20	1.35	33.0	— 2.2	68.2	19	41.1	4.0	3	25.6	64.2	26.5	24	4.0	29	73.6	25.1	3.08	+ 0.88	6,331	nw.	27	s.	17	12	12	10	9
Des Moines	849	29.07	—.06	30.01	30.58	2	29.48	20	1.10	34.9	— 0.1	69.9	17	43.5	8.5	9	27.8	61.4	28.9	17	4.0	28	77.5	28.3	1.41	+ 0.08	3,340	n.	22	n.	21	12	15	12	4
Dubuque	665																																		
Keokuk	618	29.30	—.06	29.98	30.56	2	29.34	20	1.22	36.5	— 1.2	76.2	18	45.8	12.1	3	29.0	64.1	34.1	24	5.5	7	75.7	28.8	2.25	+ 0.03	7,091	nw.	28	sw.	14	11	10	11	10
Cairo	359	29.63	—.04	30.00	30.46	2	29.36	20	1.10	44.7	— 2.5	78.7	24	52.0	22.6	10	37.5	56.1	34.9	24	3.6	7	65.4	32.0	2.84	— 1.13	8,457	n.	44	w.	20	11	14	11	6
Springfield	644	29.28	—.07	29.96	30.52	2	29.29	20	1.22	41.3	+ 1.9	77.0	18	50.8	18.0	3	33.0	59.0	30.8	14	6.0	31	69.7	31.9	2.45	— 0.38	8,170	s.	36	se.	28	12	11	13	7
Saint Louis	571	29.37	—.06	29.99	30.51	2	29.37	20	1.14	44.5	+ 1.5	81.2	18	53.5	23.0	10	36.8	58.2	37.6	25	6.0	7	68.8	33.9	3.04	+ 0.18	9,991	s.	37	w.	20	12	13	11	7
Missouri Valley.																																			
Lamar	1,028	28.91		30.03	30.42	2	29.53	11	0.88	42.6		81.0	18	53.2	16.6	9	33.5	64.4	36.2	13	7.4	4	68.6	31.0	1.94		10,167	nw.	40	s.	14	13	14	10	7
Leavenworth	842	29.10	—.05	30.02	30.50	2	29.53	19	0.97	39.2	— 1.6	80.3	18	48.9	8.8	9	30.9	71.5	38.3	18	3.2	5	71.4	30.3	1.35	— 0.98	6,431	nw.	27	nw.	21	10	11	11	9
Omaha	1,113	28.83	—.04	30.05	30.54	2	29.51	14	1.0[illegible]	31.9	— 3.8	63.6	24	43.2	— 1.4	9	24.7	65.0	33.6	13	7.0	5	80.4	26.0	1.31	— 0.19	6,439	nw.	36	n.	20	7	11	12	8
Valentine	2,603	27.26		30.06	30.39	27	29.44	13	0.95	26.7		74.4	23	38.5	— 8.5	9	17.8	82.9	43.3	30	5.5	3	69.2	17.0	0.53		10,058	n.	44	nw.	12	7	9	16	6
Huron	1,307	28.60	—.05	30.08	30.50	27	29.51	13	0.99	26.6	— 1.7	65.2	23	36.5	— 6.0	9	18.4	71.2	42.6	31	6.1	19	82.1	21.7	0.62	— 0.10	7,706	nw.	44	nw.	12	9	11	16	4
Yankton	1,228	28.68	—.05	30.06	30.49	2	29.49	13	1.00	28.1	— 2.0	58.8	23	36.5	— 6.1	9	20.7	64.9	33.4	31	5.0	3	80.3	22.3	3.38	+ 2.26	6,613	nw.	38	nw.	25	10	12	12	9
Northern slope.																																			
Fort Assinaboine	2,720	27.08	—.07	30.11	30.56	26	29.61	13	0.95	28.7	— 2.1	64.6	30	39.1	—19.1	1	16.8	83.7	40.2	19	9.4	24	62.5	17.4	0.85	+ 0.21	7,786	sw.	54	w.	23	5	6	16	9
Fort Benton	2,681	27.14		30.12	30.61	26	29.57	13	1.04	30.5	— 0.5	68.7	30	44.5	—16.8	1	19.1	85.5	40.5	7	10.9	10	66.2	20.2	0.70	— 0.07	1,749	sw.	31	sw.	23	6	9	13	9
Fort Custer	3,040	26.78	—.03	30.11	30.47	26	29.49	13	0.98	31.3	— 2.0	70.8	23	43.5	— 3.8	2	21.7	74.6	35.0	22	5.5	3	73.8	22.7	0.36	— 0.12	5,628	sw.	35	nw.	24	13	9	17	5
Fort Maginnis	4,340	25.43		30.03	30.39	26	29.48	13	0.92	29.1	— 2.2	58.0	23	38.7	— 2.7	1	20.7	60.7	35.3	29	7.1	6	65.0	18.3	2.25	+ 1.34	6,913	w.	43	w.	15	17	12	13	6
Fort Shaw	3,550	26.26		30.07	30.53	26	29.54	13	1.00	31.8	— 2.1	68.9	30	45.0	—17.9	1	20.7	86.8	37.0	5	14.6	6	64.3	20.8	0.55	+ 0.03	5,076	sw.	48	nw.	26	7	2	19	10
Helena	4,069	25.76	—.06	30.08	30.43	26	29.59	13	0.84	29.1	— 5.8	62.5	22	38.6	—10.0	1	20.6	72.5	28.2	2	7.8	25	65.9	18.7	1.00	+ 0.62	5,767	sw.	36	w.	13	14	6	15	10
Poplar River	2,030	27.83		30.14	30.65	27	29.58	13	1.08	26.9		69.9	23	38.6	—11.6	2	14.8	81.5	53.9	30	8.5	13	79.5	20.8	0.20	— 0.34	5,657	sw.	42	w.	24	9	9	16	6
Deadwood	4,600	25.27	—.03	30.11	30.38	27	29.59	13	0.78	29.5	— 2.3	60.1	23	37.1	5.9	27	21.6	54.2	28.7	9	3.6	4	75.5	22.4	2.12	+ 0.15	2,367	ne.	26	sw.	16	16	8	13	9
Cheyenne	6,105	23.88		30.07	30.33	21	29.68	13	0.66	29.6	— 3.7	66.1	23	41.7	—15.9	28	19.2	82.0	36.0	9	9.4	8	70.2	19.8	1.36	+ 0.80	9,425	nw.	56	w.	13	8	5	16	10
North Platte	2,841	27.02	—.04	30.06	30.37	25	29.57	13	0.80	30.5	— 5.2	73.0	23	42.3	— 8.0	29	20.8	81.0	41.0	23	5.0	3	76.4	23.5	0.63	+ 0. 1	6,271	nw.	36	se.	10	7	7	16	8
Fort Laramie										32.9		66.3	23	45.2	—12.0	29	20.6	78.3							1.20								4		
Middle slope.																																			
Denver	5,294	24.64	—.04	30.07	30.35	25	29.58	10	0.77	33.5	— 6.2	68.0	23	46.3	—10.7	28	22.6	78.7	35.6	15	10.7	2	65.2	20.2	2.36	+ 1.48	5,983	s.	43	n.	11	11	4	19	8
Pike's Peak	14,134	17.47		30.05	30.46	22	29.65	11	0.81	4.0	— 3.7	26.6	24	10.9	—16.1	23	— 2.1	42.7	21.2	30	7.2	18	91.4	2.0	4.72	+ 2.83	20,153	w.	76	w.	14	15	3	14	14
West Las Animas	3,899	25.95	—.05	30.00	30.30	21	29.58	18	0.72	38.7	— 2.2	80.6	23	54.9	1.8	28	25.2	78.8	53.8	23	11.5	25	62.6	24.3	0.33	— 0.12	7,516	e.	40	n.	19	8	5	15	11
Concordia	1,384	28.50		30.01	30.40	2	29.50	14	0.91	35.0		70.0	22	45.1	6.2	9	26.2	63.8	40.9	22	2.5	4	80.9	28.7	2.56		7,551	n.	34	s.	17	9	8	13	10
Dodge City	2,517	27.35	—.03	30.04	30.35	9	29.54	11	0.82	39.0	— 3.0	75.5	18	52.3	8.8	30	28.8	66.7	39.2	31	3.2	2	78.2	31.5	1.50	+ 0.69	9,689	nw.	52	s.	18	10	6	13	12
Fort Reno										48.7		87.8	24	62.5	16.9	30	34.9	70.9							0.98	— 0.83							13		
Fort Supply										45.5		82.4	17	58.7	12.0	30	32.4	70.4							0.51	— 0.57							10		
Fort Elliott	2,650	27.18	—.01	29.99	30.26	21	29.55	11	0.70	44.2	— 1.4	83.7	24	57.6	14.0	30	33.7	97.7	41.3	13	4.0	2	66.6	30.6	1.49	+ 0.96	11,324	nw.	48	se.	10	8	4	13	14
Southern slope.																																			
Fort Sill	1,200	28.74	—.06	30.00	30.32	9	29.55	19	0.78	48.7	— 3.4	88.0	24	62.8	23.3	29	37.6	64.7	43.2	24	6.8	2	60.2	32.8	1.46	+ 0.11	10,356	n.	52	se.	11	9	5	9	15
Abilene	1,745	28.18		30.03	30.33	21	29.64	19	0.68	53.4		87.0	24	66.2	21.8	30	43.4	65.2	38.7	31	4.5	3	67.4	41.3	2.47		9,093	s.	36	s.	24	8	4	14	13
Fort Davis	4,928	25.12	—.05	29.90	30.21	22	29.70	11	0.51	52.6	— 1.7	81.3	24	66.9	23.0	30	39.4	58.3	42.2	31	12.7	11	34.7	20.4	0.26	— 0.15	6,244	w.	32	sw.	19	3	1	9	21
Fort Stockton	4,010	26.93	—.05	29.97	30.22	21	29.66	11	0.55	55.1	— 1.6	89.2	23	72.9	19.8	30	39.0	69.4	47.7	23	13.0	6	42.4	27.9	0.08	— 1.30	7,348	s.	47	nw.	19	2	2	15	14
Fort Stanton		2[illegible]5				22		10	0.60	39.2		70.5	24	55.1	12.5	9	24.9	58.0	44.6	10	9.7	2	57.8	24.0	0.50		7,795	nw.	48	nw.	8	3	1	10	20
Southern plateau.																																			
El Paso	3,764	26.20	—.04	29.96	30.26	22	29.60	10	0.66	52.9	— 3.8	82.3	23	68.2	29.0	21	39.0	53.3	46.3	23	16.8	29	36.4	23.8	0.28	— 0.24	4,199	w.	25	w.	10	1	4	9	18
Lava §										48.5		79.5	23	65.9	19.0	13	31.1	60.5							0.06								2		
Santa Fé	7,026	23.15	—.06	30.05	30.34	22	29.72	10	0.63	35.0	— 4.5	65.5	23	47.5	4.0	29	24.0	61.5	37.8	30	12.0	2	53.5	17.1	0.47	— 0.12	6,545	n.	29	sw.	10	6	1	7	23
Fort Apache	5,050	24.99	—.03	29.99	30.21	21	29.72	10	0.48	42.1	— 2.9	76.0	23	59.8	18.6	30	25.7	57.4	47.7	30	12.8	2	54.0	24.0	1.06	— 0.78	5,605	ne.	33	nw.	27	5	1	11	19
Fort Bowie										48.8		76.9	24	59.7	28.0	3	38.0	48.9							0.48								3		
Fort Grant	4,856	25.16		29.96	30.18	22	29.72	10	0.46	47.5	— 4.5	77.1	23	60.2	28.2	12	37.9	48.9	31.0	31	13.5	3	42.8	24.0	0.53	— 0.89	6,149	n.	34	w.	10	5	0	8	23
Fort McDowell																																			
Fort Thomas	2,710	27.18		29.93	30.17	7	29.69	10	0.48	49.2	— 4.6	83.0	23	66.6	21.2	30	33.2	61.8	48.8	30	8.1	3	57.2	30.8	0.44	— 1.00	3,716	w.	26	n.	18	2	1	7	23
Fort Verde										48.3		70.0	22	64.0	26.5	11	32.7	52.5							2.09								4		
Maricopa										57.6		87.1	23	72.4	35.5	4	42.8	51.6							1.71								4		
Phœnix										57.3	— 4.4	93.6	24	79.4	23.6	18	35.3	70.0							0.86	+ 0.09							2		
Prescott	5,389	24.66	—.03	30.03	30.30	22	29.70	18	0.59	38.7	— 4.5	69.7	2	51.8	12.3	4	27.1	57.4	37.5	22	10.4	2	69.8	27.9	3.04	+ 1.62	5,248	sw.	36	sw.	18	7	1	11	19
San Carlos										51.7		80.9	23	67.4	31.4	20	36.1	49.5							0.82	— 0.81							6		
Willcox										48.3		83.0	23	68.1	21.5	20	28.6	61.5							0.15								4		
Yuma	141	29.83	.00	29.95	30.18	7	29.69	1	0.49	60.5	— 4.3	88.0	23	74.1	38.1	12	47.2	49.9	36.6	23	11.7	1	50.3	38.9	0.33	+ 0.11	5,251	w.	36	w.	18	3	2	7	22
Middle plateau																																			
Fort Bidwell		25.35				12		17	0.73	35.3		66.8	30	45.6	18.0	10	26.5	46.8	33.0	29	8.8	13	66.7	25.3	1.48		4,143	w.	23	sw.	7	13	6	15	10
Winnemucca	4,358	25.59	—.03	30.09	30.43	12	29.66	18	0.77	36.4	— 5.3	68.3	30	48.6	15.6	19	24.4	52.7	45.3	30	10.2	5	49.6	16.9	0.82	+ 0.03	6,779	sw.	40	sw.	13	11	4	18	9
Salt Lake City	4,348	25.59	—.04	30.10	30.40	21	29.62	18	0.79	36.6	— 5.4	67.9	23	46.8	18.1	28	28.6	49.8	30.6	31	8.7	27	67.7	26.6	2.60	+ 0.70	3,736	nw.	25	s.	16	13	9	13	9
Montrose	5,825	24.22		30.15	30.47	22	29.75	10	0.72	33.1		66.4	23	48.0	7.2	29	22.3	59.2	41.6	23	12.7	8	65.0	21.0	0.49		5,452	se.	36	sw.	18	12	6	19	6
Fort Bridger		23.39				21		10	0.70	24.6		50.0	23	35.1	— 5.8	28	14.2	55.8	37.2	21	10.6	19	75.2	17.2	0.82		8,153	sw.	40	sw.	13	10	6	17	8
Northern plateau.																																			
Boisé City	2,750																																		
Cœur d'Alene										37.6		63.0	30	46.7	12.0	1	28.6	51.0							2.07	+ 1.32							11		
Lewiston																																			
Ashland										43.7		72.0	30	55.6	24.0	1	31.8	48.0							1.43								13		
Fort Klamath										33.8		64.0	30	45.4	11.0	11	22.2	53.0							3.69								13		
Lake View										35.4		73.0	30	49.4	14.0	14	21.4	59.0							0.95								11		
Linkville										38.0		66.3	30	47.8	20.9	3	28.3	45.6							1.53								16		
Fort Spokane										40.6		75.8	31	51.3	19.4	1	29.9	56.4							0.79								6		
Spokane Falls	1,909	27.96	—.04	30.10	30.41	24	29.61	13	0.80	40.0	— 0.1	67.5	31	51.0	20.0	1	30.8	45.7	33.5	31	9.7	22	78.1	33.5	1.07	+ 0.05	4,988	sw.	42	sw.	23	5	6	12	13
Walla Walla	1,018	28.95				24		31	0.77	44.5		73.8	0	54.5	22.4	1	26.4	51.4	29.0	31	10.5	15	56.9	28.9	1.06		6,256	sw.	44	sw.	13	7	9	15	7
N. Pac. coast region.																																			
Fort Canby	179	29.81	—.05	30.01	30.45	25	29.63	16	0.82	44.1		56.0	31	49.0	35.2	16	40.3	20.8	12.8	31	6.0	14	90.2	41.1	8.26		8,464	sw.	46	sw.	21	20	16	10	5
Neah Bay										42.6		56.0	31	49.6	27.0	4	35.6	29.0							12.90								17		
Olympia	36	30.00	—.03	30.05	30.50	24	29.73	13	0.78	42.4	— 2.1	65.2	30	51.8	23.1	1	33.9	42.1	32.8	29	4.1	21	82.5	37.2	4.07	— 0.83	3,791	s.	20	s.	19	18	10	10	11
Port Angeles	14	29.98		30.00	30.50	26	29.64	21	0.86	39.7		57.3	21	48.3	25.9	1	32.8	31.4	20.1	8	6.3	12	87.4	35.9	3.23		3,138	s.	24	w.	13	16	12	11	8
Pysht										42.0		57.0	31	50.0	26.0	1	34.0	31.0							7.91								18		
Tatoosh Island	86	29.89	—.06	29.99	30.48	26	29.65	8	0.83	43.4		51.9	31	47.4	33.0	16	39.2	18.9	20.0	18	3.4	21	82.3	38.2	10.89		10,216	sw.	47	nw.	13	19	14	9	8
Astoria										44.0		56.0	30	50.1	30.0	18	37.9	53.0							7.23								20		
Portland	80	29.98	—.01	30.07	30.52	25	29.76	16	0.75	44.8	— 2.6	79.0	29	54.3	30.0	4	37.5	49.0	39.0	29	5.0	21	77.4	37.5	5.39	— 1.04	4,143	s.	23	s.	16	14	9	10	12
Roseburg	523	29.52	—.01	30.09	30.51	25	29.74	2	0.78	45.1	— 2.6	73.8	29	55.9	28.3	1	36.5	45.5	37.9	29	9.0	15	72.2	35.7	3.03	— 0.46	1,726	n.	14	s.	6	13	12	9	10
Mid. Pac. coast reg.																																			
Cape Mendocino	637	29.38		30.06	30.33	11	29.67	1	0.65	46.1	— 3.0	55.7	22	51.1	35.8	10	41.5	19.9	15.4	2	6.0	8	80.3	40.2	2.08	+ 0.23	16,401	nw.	70	se.	8	10	9	13	9
Red Bluff	332	29.71	+.01	30.05	30.35	7	29.63	1	0.71	52.8	— 2.4	74.6	12	62.0	35.0	1	43.8	39.6	29.4	12	10.0	4	63.3	38.4	1.31	— 1.80	5,732	n.	28	s.	17	11	11	8	12
Sacramento	64	29.99	.00	30.04	30.35	7	29.63	17	0.72	52.1	— 2.9	72.0	29	60.8	37.7	19	44.2	34.3	26.3	29	8.3	4	70.6	41.7	2.68	— 0.67	6,567	nw.	37	nw.	14	15	5	12	14
San Francisco	60	30.01	.00	30.06	30.36	7	29.66	1	0.70	52.6	— 1.0	73.1	26	60.7	41.0	18	46.6	32.1	24.1	26	6.5	17	68.6	41.4	2.07	— 0.04	5,949	w.	31	w.	13	13	5	11	15
S. Pac. coast region.																																			
Los Angeles	339	29.68	.00	30.03	30.26	7	29.68	7	0.57	54.3	— 1.8	76.0	21	65.6	37.2	19	45.3	38.8	28.6	15	11.9	25	80.9	47.9	2.52	— 0.49	4,555	w.	25	w.	18	8	6	11	14
San Diego	67	29.97	—.02	30.01	30.23	7	29.70	7	0.53	55.0	— 1.0	68.2	30	62.2	40.7	19	48.0	27.5	20.6	12	7.1	1	77.4	47.7	3.73	+ 2.39	4,011	w.	28	s.	18	9	1	18	12
San Luis Obispo	270	29.74		30.01	30.26	7	29.63	17	0.63	50.4		72.3	26	61.7	34.1	21	42.0	38.2	36.4	21	10.4	30	79.9	43.8	2.42		4,938	w.	42	n.	10	9	5	11	15

* 96.3, record for 30 days. † 20,250, record for 24 days. ‡ Record for 27 days. § Record for 28 days.

RAILWAY WEATHER SIGNALS.

Prof. P. H. Mell, jr., director of the "Alabama Weather Service," in the report for March, 1886, states:

The verifications of predictions for the whole area was 88 per cent. for temperature, and 85 per cent. for weather.

The following corporations comprise this system: South and North; Montgomery and Mobile; Mobile and Girard; Georgia Pacific; East Tennessee, Virginia and Georgia system in Alabama; Memphis and Charleston; Columbus Western; Atlanta and West Point of Georgia; Northeastern of Georgia; Western and Atlantic; East Tennessee, Virginia and Georgia system in Georgia; Montgomery and Eufaula; Pensacola and Selma; Pensacola and Atlantic; and the cities of Milledgeville, Georgia, and Talladega, Alabama.

ATMOSPHERIC ELECTRICITY.

AURORAS.

Auroral displays occurred during the month, as follows:

Saint Vincent, Minnesota: an aurora was observed at 10.15 p. m. of the 3d, extending from 165° to 270° azimuth, with an altitude of from 15° to 20°. It consisted of a pale diffused light, without any perceptible motion, and continued until after midnight.

Eastport, Maine: a faint auroral light was observed from 9 to 10 p. m. of the 7th.

Saint Vincent, Minnesota: an aurora was observed about 10° to the west of the northern horizon at 10.20 p. m. of the 9th, extending over 40° of azimuth, with an altitude of 15°, consisting of pale yellow beams of light, which rose and fell at irregular intervals, being apparently drawn to and repelled from the magnetic zenith. The aurora was still visible at midnight, but had diminished greatly in intensity, and disappeared during the early morning of the 10th.

Fort Totten, Dakota: an auroral light was observed from 8.40 to 11.50 p. m. of the 21st, having an altitude of 15° and azimuth 100°; at 9.40 p. m. it assumed an arch formation above a dark segment, which disappeared at 10.10 p. m. Shooting beams were also observed.

Mackinaw City, Michigan: a faint auroral light was observed at 8.30 p .m. of the 26th, of 90° azimuth and 20° altitude; the display continued until the early morning of the 27th.

Fort Buford, Dakota: an aurora was observed at 9.25 p. m. of the 26th, continuing until the early morning of the 27th, consisting of arch of a whitish color of about 15° altitude, and extending from northwest to northeast; streamers, of a reddish tinge, having an upward and lateral motion, would rise to an altitude of about 30° above the arch.

Marquette, Michigan: a faint auroral arch was observed from 10 to 11.30 p. m. of the 26th, having an altitude of 20° and extending over 120° of azimuth.

Saint Vincent, Minnesota: at 10.43 p. m. of the 26th an aurora was observed in the northern horizon; the tints were very beautiful, and varied from an emerald green to a lemon color. The arch upon which the aurora rested was clearly defined, but presented an undulating appearance during the early stage of the display, changing gradually until at the period of maximum brilliancy it formed a perfect segment, from behind which the light shot upwards in broad tapering bands to a height of 45°. When several of these streamers would surge upwards simultaneously, the light was so intense that objects would cast a shadow, and when disappearing, the whole northern quarter would glow with a pale green hue. No marked exhibition of "merry dancers" was observed in connection with this display, the light being thrown upwards in a succession of phenomenally brilliant waves and disappearing so rapidly as to apparently leave a nebulous cloud floating in the atmosphere. No corona or glory was formed. The aurora continued until 2.10 a. m. of the 27th, and during its prevalence extended from 165° to 210° azimuth, with an altitude of 45°.

Escanaba, Michigan: an aurora was observed from 9 p. m. to midnight of the 26th, consisting of a diffused pale yellow light, resting upon a narrow dark segment.

Alpena, Michigan: an aurora was observed from 10 to 11.30 p. m. of the 26th, consisting of a diffused light, resting on a dark segment in the northern horizon.

Eastport, Maine: an auroral light of a whitish color was observed from 6.45 to 11 p. m. of the 26th.

Mackinaw City, Michigan: a faint auroral light was observed from 9.10 to 11.40 p. m. of the 27th, of 50° azimuth and 20° altitude.

Escanaba, Michigan: a faint aurora was observed from 10.10 to 11.41 p. m. of the 27th, having an altitude of 15°.

Gardiner, Kennebec county, Maine: a brilliant aurora was observed at 8 p. m. of the 28th; previous to 9 p. m. beams were observed to shoot up from a dark cloud, after which hour the aurora gradually faded away, and before 11 p. m. had entirely disappeared.

Fort Bidwell, California: a brilliant aurora was observed in the north from 2.15 to 3.20 a. m. (local time) of the 30th, consisting of two distinct parallel arches, the upper arch having an altitude of 25° and extending over 20° of azimuth; the extremities of either arch did not approach within 3° of the horizon. The lower arch was well defined and of a dark red color, resting on an extremely black base; the upper arch was a bright red, its upper edge being poorly defined and blending with the straw color of the atmosphere between it and the zenith. Several luminous beams, having a lateral motion, were observed to shoot up from the lower arch, but owing to the rapidity of their movement, it was impossible to ascertain their altitude with any degree of accuracy.

Saint Paul, Minnesota: a faint auroral display was observed from 10.03 to 11.45 p. m. of the 30th, consisting of a pale white light above a dark slate-colored bank, and extending from 170° to 200° azimuth, with an altitude of 20°.

Yankton, Dakota: a faint aurora was observed from 9.40 to 10.45 p. m. of the 30th, consisting of an arch of white light with three streamers, having an altitude of 20° and extending from 195° to 250° azimuth.

Port Angeles, Washington Territory: an aurora was observed during the evening of the 30th, the time of beginning and ending not being known. It had the form of an arched band of yellow light about 4° in width, with an altitude of 25°, and extending about 45° east and west of the magnetic meridian. The segment was well defined and very dark, with an altitude of about 20°.

Duluth, Minnesota: a very bright aurora was observed from 4 a. m. to daylight of the 30th, consisting of bright, straw-colored beams often passing the zenith, and with an occasional lateral motion.

Bismarck, Dakota: an auroral light of a pale yellow color, above a dark segment 2° in altitude, was observed from 9.45 to 11.30 p. m. of the 31st, extending from 136° to 226° azimuth, with an altitude of 10°.

Poplar River, Montana: a brilliant aurora was observed from 2.30 to 4.30 a. m. of the 30th, and from 10 p. m. of the same date to 3 a. m. of the 31st, the latter display consisting of a diffused light of a pale straw color.

Fort Buford, Dakota: an aurora was first observed at 10.20 p. m. of the 30th, consisting of an arch of diffused white light, resting on a dark base and extending from northwest to northeast, of about 35° altitude; streamers of a bright white color rose from the northwestern portion of the arch between 10.48 and 11 p. m., reaching, at their maximum, about 60° in altitude. The arch grew fainter after 11 p. m., and entirely disappeared at 11.40 p. m.

Fort Buford, Dakota: an aurora was observed from 9.52 to 11.55 p. m. of the 31st, consisting of a diffused whitish light, forming an irregular arch of 25° in altitude, and extending from northwest to northeast. No dark segment was observed, as the light extended to the horizon, the northern portion being much brighter than the extremities.

Grand Forks, Grand Forks county, Dakota: a moderate auroral arch was observed on the 31st, extending from northwest to northeast, with numerous streamers of a pale white and greenish tint, shooting upwards to an elevation of 45°.

Auroral displays were also observed during the month, as follows: